I. OBJECTIVES AND STRATEGIES

GOAL: All Learning communities have equitable access to diverse, quality technology and timely technical support.

OBJECTIVES	STRATEGIES
	WAN and provides network failure alarms that can be accessed remotely
5.5 Lexington Four will implement an obsolescence and upgrade plan to replace and recycle equipment and software.	Ensure that the obsolescence and upgrade plans are included in the district technology plan
5.6 Lexington Four will increase their ability to design Web pages and Web-based instruction that are accessible to students and staff with special needs in accordance with Section 508 of the Rehabilitation Act of 1973 as amended by the Workforce Improvement Act of 1998.	Provide training in basic Web page accessibility principles to staff, teachers—and, when appropriate, students—who design Web pages as part of the curriculum

II. ACTION LIST

- Lexington Four should have access to a database with a complete technology inventory, including assistive technology, showing the type of equipment/device, its location, its use, peripherals to which it has access, applications to which it has access, and other relevant information.
- Lexington Four should maintain a needs-assessment document showing technology-based resources and applications required to address the mission of the district, including networking, hardware/devices, and software applications as well as assistive technology.
- Lexington Four should include in their local budgets line items for technology, including assistive technology, with sufficient funding to implement the designated strategies.
- Lexington Four should publish a procedure for the perpetual review of equipment used in multimedia development processes. Reviews should quantify equipment and processes by their impact on teaching and learning.
- Lexington Four should maintain a strategic plan for acquiring and implementing technology, including assistive technology, for universal access to network resources. This document should show the strategies for addressing the identified needs, the persons responsible for

addressing and completing each strategy, and the resources/funds necessary to fully implement the strategies.

- Lexington Four technology plans should include a strategic vision for building a multimedia infrastructure to support instruction.
- Lexington Four technology plans should include a disaster recovery plan.
- Lexington Four technology plans should include an obsolescence and upgrade plan, including strategies to refurbish, resell, recycle, or donate obsolete devices.
- Lexington Four policies outlined in district technology plans should include security accountability, virus protection, and Internet filtering guidelines.
- Lexington Four should have records to show that they have assessed their current LAN/WAN technology.
- Lexington Four network managers should provide the district office with quarterly reports of statistics on bandwidth utilization.
- Lexington Four should use the SDE Technology Counts on-line survey to report on their use of network management tools.
- Lexington Four should ensure that new school construction provides for isolated power in each classroom, computer lab, telecommunications closet, and work area.
- Lexington Four should provide UPS (uninterruptible power supply) systems for all critical equipment.
- Lexington Four should use the minimum staffing and salary requirements for the positions specified in objective 4.3.
- Lexington Four should have a network manager in place.
- Lexington Four staff, teachers, and students should be aware of basic Web accessibility guidelines when designing Web pages.
- Lexington Four should designate a Web accessibility resource person to coordinate training and information sharing among district personnel.

III. IMPLEMENTATION ACTION STEPS

DISTRICT

- Maintain technology inventories, including assistive technology
- Conduct needs assessments to identify required technology, including assistive technology
- Create a strategic technology plan that includes strategies for acquiring, managing, and implementing required technology, including assistive technology
- Implement a district disaster recovery plan and an obsolescence and upgrade plan
- Seek funding from local, state, and federal sources
- Encourage and publicize flexible access schedules
- Create a vision for a multimedia infrastructure
- Encourage schools to provide multimedia-capable workstations
- Research and implement an integrated network infrastructure
- Use bundled distribution packages to manage fully converged networks
- Install and maintain secure networks
- Employ staff for adequate network maintenance and support
- Implement a district management application that monitors bandwidth on the LAN and WAN
- Ensure that schools have adequate electrical distribution systems
- Publish procedures and schedules for review of equipment and software used in multimedia development including rubrics for judging impact on teaching and learning
- Provide schools with the necessary guidance and training in creating Web pages to ensure that electronic information is accessible to students and teachers with special needs

SCHOOLS

- Create a strategic technology plan that includes strategies for acquiring and implementing required technology, including assistive technology
- Seek funding from local, state, and federal sources
- Create flexible schedules for access to technology
- Provide multimedia-capable workstations
- Install and maintain secure networks
- Employ staff for adequate network maintenance and support
- Provide adequate electrical distribution systems

IV. FUNDING CONSIDERATIONS

DISTRICT

- Total cost of ownership (TCO) calculation to determine the allocation per student per year necessary to keep the pace with the need for access to network resources [Consortium for School Networking's TCO tool available on-line at http://www.classroomtco.org]
- Technology committee meetings to develop products such as the multimedia infrastructure plan and the disaster recovery plan
- Materials to publish an updated technology plan
- Multimedia teacher workstations including data projectors
- Hardware and software to secure all LANs and WANs to comply with district, state, and industry standards
- Technology director, networking engineer, and networking technician
- Equipment inventory assessment program
- Isolated circuit plan
- Support planning
- Technology needs assessments and surveys

SCHOOLS

- Total cost of ownership (TCO) calculation to determine the allocation per student per year necessary to keep the pace with the need for access to network resources [Consortium for School Networking's TCO tool available on-line at http://www.classroomtco.org]
- Technology committee meetings to develop products such as the multimedia infrastructure plan and the disaster recovery plan
- Materials to publish an updated technology plan
- Multimedia teacher workstations including data projectors
- Hardware and software to secure all LANs and WANs to comply with district, state, and industry standards
- Support planning
- Technology needs assessments and surveys

V. EVALUATION

Objectives	Possible Baseline Data	Possible Data Sources to Be Used for Ongoing Evaluation and End-of-Program Report	Outcomes (Include "action list" items achieved.)				
			JAN. 2007	JAN. 2008	JAN. 2009	JAN. 2010	JAN. 2011
5.1 Lexington Four will ensure that all students, including those with special needs, and teachers have access to electronic information resources.	• Statewide achievement test scores • District report cards • Professional development tracking and surveys • District, school, and community surveys • School technology and improvement plans • Documented access to technology resources • Technology needs assessments • SDE Technology Counts on-line survey • Budget data	• Statewide achievement test scores • District report cards • Professional development tracking and surveys • Observations and interviews • Documented access to technology resources • District, school, and community surveys • School technology and improvement plans • Documented access to technology resources • Technology needs assessments • SDE Technology Counts on-line survey • Budget data • State personnel reports	XX	XX	XX		
5.2 Lexington Four will ensure that their schools have an integrated, secure network infrastructure with dynamic bandwidth capacity to support fully converged networks that allow for communication, data collection and distribution, and distance learning .			XX	XX	XX		
5.3 Lexington Four will have qualified technical staff, including one networking engineer per WAN or per ten LANs, one networking technician per LAN, and one end-user support technician per every five hundred users.			XX	XX	XX		
5.4 Lexington Four will implement a disaster recovery plan for all points of failure in LANs and WANs, including redundant data storage, robust automated backup, and immediate hardware recovery.			XX	XX	XX		

V. EVALUATION

Objectives	Possible Baseline Data	Possible Data Sources to Be Used for Ongoing Evaluation and End-of-Program Report	Outcomes (Include "action list" items achieved.)				
			JAN. 2007	JAN. 2008	JAN. 2009	JAN. 2010	JAN. 2011
5.5 Lexington Four will implement an obsolescence and upgrade plan to replace and recycle equipment and software.	• State personnel reports		XX	XX	XX		
5.6 Lexington Four will increase their ability to design Web pages and Web-based instruction that are accessible to students and staff with special needs in accordance with Section 508 of the Rehabilitation Act of 1973 as amended by the Workforce Improvement Act of 1998.			XX	XX	XX		

*WIP – Work In Progress

CUMULATIVE TARGETS AND BENCHMARKS

Note: These targets and benchmarks will be monitored and adjusted annually.

2005–06

Learners and Their Environment

Student Achievement improvements with technology are to be determined by the district division of Instruction.

Professional Capacity

Provide staff development opportunities for teachers to include handheld PDA course and Introduction to Technology for the classroom. Provide Wired Wednesday staff development opportunities. Begin working with teaching teams during professional planning periods.

Instructional Capacity

Increase instructional capacity through additional student use software. Purchases reviewed at the district level with an eye toward formative assessment.

Community Connections

Involve Parents and Community at the school level. Refer to the local school plans for details.

Support Capacity

Implement new Internet filtering system; upgrade Internet access capacity to 3mg; refresh 1/3 of teacher computers; refresh 1/5 of vocational program computers. Complete overhaul of technology inventory system. Remove and dispose of outdated technology items including non-functioning and non-repairable computers from schools being refreshed.

2006–07

Learners and Their Environment

Student Achievement improvements with technology are to be determined by the district division of Instruction.

Professional Capacity

Participate in the implemention of a one year pilot of E-Schoolware's "e-Portfolio" system for tracking teacher professional development in Technology.

Instructional Capacity

Integrate the use of Smart Boards into the classroom curriculum at Swansea Primary and Frances Mack Primary and Sandhills Elementary School.

Community Connections

Involve Parents and Community at the school level. Refer to the local school plans for details.

Support Capacity

Implement email SPAM filtering system; upgrade Internet access capacity to 10mg; refresh 1/3 of teacher computers; refresh 1/5 of vocational program computers. Complete overhaul of technology inventory system. Remove and dispose of outdated technology items including non-functioning and non-repairable computers from schools being refreshed.

2007–08

Learners and Their Environment

Student Achievement improvements with technology are to be determined by the district division of Instruction.

Implement use of eLearning pre/post assessment for Technology Proficiency.

Professional Capacity

Test all continuing contract teachers using the e-portfolio system.

Instructional Capacity

Increase instructional capacity through additional student use software. Purchases reviewed at the district level with an eye toward formative assessment.

Implement use of MAPS and continue using Pearson Benchmark products.

Community Connections

Involve Parents and Community at the school level. Refer to the local school plans for details.

Support Capacity

Maintain and improve existing support systems, review all systems for viability and functionality.

2008–09

Learners and Their Environment

Student Achievement improvements with technology are to be determined by the district division of Instruction.

Professional Capacity

Increase professional capacity for teachers as well as administrators.

Instructional Capacity

Increase instructional capacity through additional student use software. Purchases reviewed at the district level with an eye toward formative assessment.

Community Connections

Involve Parents and Community at the school level. Refer to the local school plans for details.

Support Capacity

Maintain and improve existing support systems, review all systems for viability and functionality.

2009-2010

Learners and Their Environment

Student Achievement improvements with technology are to be determined by the district division of Instruction.

Professional Capacity

Increase professional capacity for teachers as well as administrators.

Instructional Capacity

Increase instructional capacity through additional student use software. Purchases reviewed at the district level with an eye toward formative assessment.

Community Connections

Involve Parents and Community at the school level. Refer to the local school plans for details.

Support Capacity

Maintain and improve existing support systems, review all systems for viability and functionality.

2010-2011

Learners and Their Environment

Student Achievement improvements with technology are to be determined by the district division of Instruction.

Professional Capacity

Increase professional capacity for teachers as well as administrators.

Instructional Capacity

Increase instructional capacity through additional student use software. Purchases reviewed at the district level with an eye toward formative assessment.

Community Connections

Involve Parents and Community at the school level. Refer to the local school plans for details.

Support Capacity

Maintain and improve existing support systems, review all systems for viability and functionality.

ACKNOWLEDGEMENTS

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Technology Committee

Linda Warren
District Technology Coordinator, Lexington School District Four

Robin Salonich
District Technology Coach, Lexington School District Four

Mary Lance Williams
Assistant Principle, Frances Mack Primary School

Ashley Holmes
Math & Science Coach, Sandhills Middle School

Denise Myers
Business Education Teacher, Swansea High School

Kaye Shaw
Director, Midlands Education and Business Alliance

Jay Lindler
Instructional Technology, Lexington School District Four

Linda Hawkins
Associate Superintendent, Lexington School District Four

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Lexington School District Four Technology Plan 2003-08. Total document available on- line at http://www.lexington4.net/images/stories/Technology/2002-03technologyplan.doc or go to www.lexington4.net and follow the links to Information.

Universal Service Administrative Company, Schools and Libraries Division (Erate) on-line at http://www.universalservice.org/sl/

Course - South Carolina Department of Education, *Technology Planning for South Carolina Educators Part I and Part II*, on-line course through South Carolina On-line Professional Development program (SCOPD).

International Society for Technology in Education – on-line resource at http://www.iste.org/

Appendix 1

No Child Left Behind Action Plan

1. Describe how your district will use federal funds under Enhancing Education Through Technology (Ed Tech) section to improve the student academic achievement, including the technology literacy, of all students attending school served.

The district will coordinate federal funds under Enhancing Education Through Technology (ED Tech) section for both the formula and competitive grant process to provide technology funding for three school in greatest need. The formula grant funds will supplement funds of the competitive grant, if awarded to district, to employ School Technology Leaders (STLs) to provide comprehensive, sustained professional development for teachers and administrators, as well as, to provide parent technology education and to purchase wireless computers to increase accessibility to technology. If competitive grant is not funded, the formula grant funds will be used to provide professional development on a much smaller scale. Integrating technology appropriately can significantly impact the efficiency and effectiveness of the instructional program. Improving teachers' ability to integrate technology through comprehensive professional development will directly affect students academic achievement.

2. Describe you district's specific goals for using advanced technology to improve student academic achievement, aligned with challenging State academic content and student academic achievement standards. This explanation should include a description of the curriculum and teaching strategies that integrate technology effectively in to curricula and instruction, based on an intensive review of relevant research.

The district's goals for the technology grant process are 1) to increase student performance on the state assessments that support the South Carolina Curriculum Standards by increasing teacher ability to use innovative teaching strategies that integrate technology as a natural part of curriculum and instruction; 2) to increase the technology proficiency level of certified staff through staff development that is sustained over time; and 3) to provide parents with opportunities to better understand how technology integration improves learning, as well as, to increase their technology literacy.

After an extensive review of the research, two strategies were selected to accomplish the three goals: 1) the employment of School Technology Leaders (STLs) to provide comprehensive, sustained professional development for teachers and administrators, and 2) purchase of wireless computers to provide increased access to technology in the three schools identified as being in greatest need.

STLs will provide comprehensive professional development through courses, mini sessions, study groups, classroom demonstration, etc., such that certified staff increase their ability to integrate technology into curriculum and instruction. STLs will

also provide parent technology fairs so that parents will have increased communication opportunities with the school and opportunities to advance their technology literacy.

According to the well-researched International Society for Technology in Education (ISTE), students should be capable information technology users; information seekers, analyzers, and evaluators; problem solvers and decision makers; creative and effective users of productivity tools; communicators, collaborators, publishers, and producers; and informed, responsible, and contributing citizens. (Electronic School, 2000) A 1998 study by the Educational Testing Service showed that technology can help raise student achievement if it is used for learning simulations and applications. But the study also found that if computers are used mainly for drill and practice, technology can actually lower achievement. (Electronic School, 1999) Reported in the 135-page research report on Effectiveness of Technology in Schools revealed, "'Educational Technology has demonstrated a significant positive effect on achievement'...However, the report adds that technology's effect on a school is directly attributed to how it is implemented and how educators are instructed to use it...Too often hardware ends up unused or incorrectly used because of a lack of training." (Curriculum Administrator, 2000) In order for integrated technology to improve student performance, teachers must be trained to integrate technology such that students use technology at higher levels than drill and practice in order to meet the performance challenges of state curriculum standards and assessment.

3. Describe the steps the district will take to ensure that all students and teachers in school served by the local educational agency have increased access to educational technology.

The formula grant will not be used to purchase technology. The formula grant funds will be used for professional development only. But by increasing the teachers' ability to integrate technology in curriculum and instruction, teachers will use the available technology more affectively.

However, the competitive grant, if funded, will provide wireless computer carts in order to provide greater access to technology. The carts will provide the benefits of "anytime, anywhere learning". The carts will be used for teacher training, student instruction, and parent training. Teachers will use the carts during the day with students. Technology leaders will use the carts to provide training in software application for both teachers and parents during off-school hours. Through the professional development component provided by STLs, teachers and administrators will become knowledgeable in the use of technology such that they can and will use the available technology.

4. Describe how your district will use funds under this subpart (such as combining the funds with monies from other sources such as federal, state, and local sources), to help ensure that students in high-poverty and high-needs schools have access to technology and to ensure that teachers are prepared to integrate technology effectively into curricula and instruction.